WHAT IS CLAIMED IS:

1. A method of manufacturing an internal grooved tube comprising the steps of:

inserting a grooved plug having a large number of fine spiral grooves on the outside surface into a blank tube rotatably; and

pressing the peripheral wall of the blank tube against the outside surface of the grooved plug with several balls revolving both around the circumference of the blank tube and on its axis in a location of the grooved plug inserted, while drawing out the blank tube longitudinally in one direction;

wherein the number of balls is limited to 2 to 3.

2. A method of manufacturing an internal grooved tube according to claim 1, wherein a lead angle θ of said grooves of the grooved plug to the axis is limited to 26 to 45 degrees.

3. A method of manufacturing an internal grooved tube according to claim 1, wherein the direction of revolution of the balls is allowed to match the direction of rotation of the grooved plug.

4. A method of manufacturing an internal grooved tube according to claim 2, wherein the direction of revolution of the balls is allowed to match the direction of rotation of the grooved plug.

5. An internal grooved tube having a large number of fine spiral grooves formed on an inside surface in parallel arrangement, wherein said grooves are formed to assure that the ratio of a groove width W in the tube axial direction to a groove height H is in the range of 1 to 2, and wherein the tube is formed by:

inserting a grooved plug having a large number of fine spiral grooves on the outside surface into a blank tube rotatably; and

pressing the peripheral wall of the blank tube against the outside surface of the grooved plug with 2 or 3 balls revolving both around the circumference of the blank tube and on its axis in a location of the grooved plug inserted, while drawing out the blank tube longitudinally in one direction.

6. An internal grooved tube according to claim 5, wherein a lead angle θ' of said grooves of the grooved plug to the axis line is in the range of 26 to 45 degrees.

7. An internal grooved tube according to claim 5, wherein the direction of revolution of the balls is allowed to match the direction of rotation of the grooved plug.

8. An internal grooved tube having a large number of fine spiral grooves formed on an inside surface in parallel arrangement, wherein said grooves are formed to assure that the ratio of a groove width W in the tube axial direction to a groove height H is in the range of 1 to 2, and wherein a lead angle θ' of said grooves to the tube axis is in the range of 26 to 35 degrees, and wherein the tube is formed by:

inserting a grooved plug having a large number of fine spiral grooves on the outside surface into a blank tube rotatably; and

pressing the peripheral wall of the blank tube against the outside surface of the grooved plug with 2 or 3 balls revolving both around the circumference of the blank tube and on its axis in a location of the grooved plug inserted, while drawing out the blank tube longitudinally in one direction.

9. An internal grooved tube according to claim 8, wherein a lead angle θ' of said grooves of the grooved plug to the axis line is in the range of 26 to 45 degrees.

10. An internal grooved tube according to claim 8, wherein the direction of revolution of the balls is allowed to match the direction of rotation of the grooved plug.